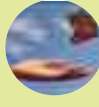

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Release those endorphins, tackle depression

The cloud of depression can drain the spirit, but the cloud can be dissipated. A slide into depression often begins with the inactivity that comes with many illnesses. Activity can play a large role in helping to counteract feeling down. Exercise can release natural endorphins that can enhance mood. You may want to consider joining an exerciser group or a rehab program if that's available in your area.

Rehab and exercise programs do more than just build strength. They can also provide a platform where people can interact with others who are dealing with similar issues. This can open the door to other social activities and possibly new friendships. It's important to find ways to reach out to the community for help.

From time to time most people experience feeling flat, and not interested in doing the simplest of things. But if those feelings persist for weeks at a time, they may be a sign of depression. Other signs include a gradual lack of interest in friends or doing once-enjoyable activities.

It's normal to experience feelings of sadness when facing a chronic illness and it is certainly painful to receive a COPD diagnosis and accept the permanence of the condition. Just contemplating the day-to-day difficulties posed by the illness may seem overwhelming. However, if feelings of sadness or hopelessness settle in rather than dissipate with time, they are symptoms of depression. This type of depression, triggered by bad news or life challenges, is called a reactive depression because it is a reaction to circumstances.

Although all types **Continued on Page 5**

Chronic Obstructive Pulmonary Disease
www.copdcanada.info

Aging and lung elasticity

Accelerated aging may play a role in the development of COPD. During normal aging, pulmonary function deteriorates progressively and pulmonary inflammation increases, accompanied in the lungs by the features of emphysema. These features are accelerated in COPD. Cigarette smoke and other oxidative stresses result in cells being no longer capable of dividing and this could accelerate lung aging. There is also evidence that anti-aging molecules are decreased in the lungs of COPD patients, compared to smokers without chronic obstructive pulmonary disease, resulting in enhanced inflammation and further progression of COPD.

An enhanced or abnormal inflammatory response to the lungs to inhaled particles and gases, usually from cigarette smoke, is considered to be a general disease-causing mechanism in chronic obstructive pulmonary disease. There is a relationship between chronic inflammatory diseases and aging, and the processes involved in aging may provide a novel way of looking at the origin, development and resultant effects of COPD. There is good evidence linking aging and COPD.

There are a plethora of hypotheses relating to the development of

Continued on Page 2

Ask Dr. Bourbeau

Jean Bourbeau is a
respirologist and full professor
in the Department of Medicine
and Epidemiology and
Biostatistics, McGill University,
Montreal



Q My wife and I are planning a driving trip to Banff, Alta. (elevation 4,500 feet). My oxygen saturation stats are usually around 88 to 90 but that's at sea level. Should I take oxygen for our trip?

A A driving trip to Banff (altitude 4,500 feet) is less than what it would be for a flight. As an example, at typical cruising altitude, air pressure in the cabin is equivalent to the outside air pressure at 1,800 to 2,400 m (6,000 to 8,000 feet) above sea level. For a flight it is recommended that those with a resting

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Ask Dr. Bourbeau

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oxygen saturation >95% and six-minute walk oxygen saturation >84% may travel without further assessment. We say that patients should ideally maintain a PaO₂ of at least 50 mmHg. If you're in doubt, your lung doctor can send you for a hypoxic challenge test.

Q I have COPD. Is there any advantage to using a CPAP machine to help my breathing at night?

A This is needed when patients have a diagnosis of obstructive sleep apnea like it is for anyone in the general population. This diagnosis has to be done before considering the CPAP treatment; CPAP is not a typical treatment for a patient who only has COPD.

Q What does it signify if you are intubated and put on a ventilator? Can you be weaned off these and brought back to "normal"?

A This is usually because someone has presented with an acute respiratory failure severe enough that the person cannot breathe by himself without putting his life in danger. Depending on the reason why the person had an acute respiratory

failure, the person can usually be weaned from a respirator as long that the respiratory problem can be resolved. In the situation of a very severe underlying lung condition such as end stage COPD or idiopathic lung fibrosis, it could become very difficult to wean the patient, and bring them back to "normal."

Q I have serious back pain issues and take opioids daily. It seems to me that the opioids could be fighting the bronchodilator I take daily to manage my COPD. Are the constricting side effects of the opioids impacting my ability to breathe?

A The opioids don't fight the COPD. Respiratory failure could be a consequence of an overdose of opioids. This has to be managed with particular care in patients with COPD and chronic respiratory failure, those with pCO₂ retention. Those patients may be more at risk of having a worsening of their respiratory failure and an increase of pCO₂. It is very important that your physician knows about it and, if in doubt, a venous or capillary blood gas can be done to check the CO₂.

Q I usually get the flu vaccine. This year I got the high dose flu vaccine as the provincial government in Ontario now pays for it. Should I also get the pneumonia vaccine? I have never had that one before.

A It is better to receive the high dose flu vaccine that is more effective. You should also receive the pneumonia vaccine, although this one is usually once in a lifetime. Speak with your pulmonologist to decide which pneumonia vaccine to receive.

Dr. Jean Bourbeau is director of the Center for Innovative Medicine (CIM) of the Research Institute of the McGill University Health Centre (MUHC) and director of the Pulmonary Rehabilitation Unit. He is the past president of the Canadian Thoracic Society (CTS) and is a member of the scientific committee of GOLD.

We invite your questions. Please mail questions to: Ask Dr. Bourbeau 555 Burnhamthorpe Rd., Suite 306, Toronto, Ont. M9C 2Y3—or you can e-mail questions to: AskCOPDCanada@gmail.com. General inquiries: COPD Canada Tel: 416-465-6995 E-mail: exec.copdcanada@gmail.com

Editor's note: For more information on Dr. Bourbeau's Living Well with COPD program, visit www.livingwellwithcopd.com

Lung elasticity continued from Page 1

COPD. A central feature is the change from the normal inflammatory response to cigarette smoke in the lungs, which occurs in all smokers, to the enhanced or abnormal immune responses in the lungs that characterize the development of COPD. Two processes are considered to be important disease-causing mechanisms as part of this abnormal inflammatory response. These processes result in the failure of repair mechanisms, which result in the alveolar destruction in emphysema and remodelling of the small airways.

Recent evidence suggests that the persistence of chronic inflammation in the lungs in COPD may involve the aging of cells and their inability to divide. There are features of accelerated aging in COPD patients, particularly in emphysema. In addition, COPD is associated with systemic features such as increased risk of osteoporosis and cardiovascular disease, which also may be linked to accelerated aging. This, together with the fact that the presence of COPD is age-dependent, suggests a close relationship between the pathogenesis of COPD and aging processes.

Several clinical observations support the hypothesis that accelerated aging may play a role in the development of COPD. Lung function declines with age in healthy individuals and this may be accelerated in patients with COPD. The aging lung shows progressive distal air space enlargement, with loss of gas-exchanging surface area and the support of the alveolar attachments for peripheral airways. Although these structural changes are thought to be non-destructive, in contrast with smoking-induced emphysema, they do have functional consequences, resulting in a loss of elastic recoil of the lungs, an increase in residual volume and functional residual capacity or over-inflation of the lungs. In addition, there is associated elastin fibre fragmentation. This loss of elastin fibres is similar to that which occurs with aging in the skin, resulting in loss of elasticity and skin wrinkling which is enhanced by smoking. Interestingly, the degree of skin wrinkling correlates with quantitative measurements of emphysema by CT (computed tomography) scanning.

More information at: <http://www.ncbi.nlm.nih.gov/pubmed/19614601>


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Pulse: News about COPD

Playing harmonica turns out to be therapy for veterans with COPD

■ **Tampa, Fla./**A new class offered by James A. Haley Veterans' Hospital is offering veterans the chance to make music while treating their breathing problems. The COPD Foundation and the Academy of Country Music for individuals with Chronic Obstructive Pulmonary Disease created the Harmonicas for Health program. According to Dave Folds, the breathing used to play the harmonica is similar to the breathing exercises used in therapy for COPD. Folds is the Health Promotion-Disease Prevention Coordinator. "Harmonicas for Health is using a musical instrument to use the same inhale-exhale exercises used by pulmonary rehabilitation to strengthen the diaphragm muscles," Folds explained. "Basically, the breathing exercises are pursed lips-style breathing, like breathing in and out of a straw. Breathing through a straw would be the same way you would blow in and out of a harmonica."

 <https://tinyurl.com/y2r3bkhl>

Expanding the potential of spirometry to identify early impairment in COPD


■ **Pittsburgh/**While spirometry is well validated in the diagnosis of chronic obstructive pulmonary disease, the full potential of spirometry to identify early disease has not been completely explored, according to Virginia A. Schad, PharmD, RPh. Her review of the potential of spirometry was published in a recent edition of *Respiratory Medicine*. Although a wide range of spirometric parameters are routinely reported, clinical use of measures other than the forced expiratory volume in 1 second (FEV1), forced vital capacity (FVC), and the ratio of these two measures has been limited. She and her colleagues reviewed the literature to explore the theoretic ability of spirometry to capture fine pathophysiologic changes in early airway disease, to highlight the shortcomings of current diagnostic criteria, and to discuss existing evidence for spirometric measures that may be used to better detect early airflow impairment. They found that spirometry may be an ideal diagnostic tool because it is widely performed. As advances are made in the understanding of biologic mechanisms underlying early airway disease, the possibility exists to better understand and use spirometry, particularly in an era of digital spirometry.

 <https://tinyurl.com/y523kxep>

Pulse: News about COPD

Increased synthetic cannabinoid use found in older adults with COPD

■ **Toronto**/Older adults above the age of 66 with chronic obstructive pulmonary disease (COPD) were found to be twice as likely to use prescription synthetic oral cannabinoids when compared to adults of the same age without COPD, according to a study published recently in the journal *Drugs & Aging*. Research led by St. Michael's Hospital in Toronto and the Institute for Clinical Evaluative Sciences (ICES) sought to examine the frequency of synthetic oral cannabinoid use, human-made versions of THC such as nabilone and dronabinol, in patients with COPD. Previous studies by the study group have revealed that other psychoactive drugs such as opioids and benzodiazepines have been frequently used for care related to COPD, which were correlated to a potential increase in mortality risk. Currently, safety recommendations advise against prescribing cannabinoids in patients with COPD. However, due to the effects of THC in the central nervous system that can produce effects such as sedation and pain relief, many patients and physicians are turning to its use to manage symptoms. Researchers analyzed information obtained from a retrospective, population-based, cohort study on 172,282 adults with COPD and 1,068,256 older adults without COPD all aged 66 years or older.

 <https://tinyurl.com/yxq9n9w2>

Study looks at increasing effectiveness of influenza vaccination

■ **Atlanta**/A recent study published in the journal *Clinical Infectious Diseases* looked at how greater benefits could be achieved to prevent influenza. To help guide research and policy agendas, the researchers aimed to quantify the magnitude of influenza disease that would be prevented through targeted increases in vaccine effectiveness or vaccine coverage. Their study found that small, attainable improvements in effectiveness or coverage of the influenza vaccine could lead to substantial additional reductions in the influenza burden. Improvements in vaccination effectiveness would have the greatest impact in reducing hospitalizations in adults aged ≥ 65 years. Improvements in vaccination coverage would have the largest benefit in reducing illnesses in adults aged 18 to 49 years.

 <https://www.ncbi.nlm.nih.gov/pubmed/31344229>

Endorphins, the natural mood enhancer

Continued from page 1

of people experience depression, it is especially common in people with chronic obstructive pulmonary disease.¹ The depression that affects people with COPD goes beyond the reactive depression that affects individuals with other chronic conditions. This suggests that there may be an organic or chemical—not just a reactive-component—to the depression in people with COPD.

The medical profession is just beginning to understand why people with COPD are more prone to depression. There may be a genetic predisposition, which can be present as early as childhood. The tendency to become depressed may begin during the teen years and may increase the risk of nicotine addiction. Research² has shown that adolescents who are depressed are more likely to become addicted to cigarettes. Many kids experiment with cigarettes but those who are not depressed are more likely to discontinue use compared to those who are depressed. Thus, smokers have a higher rate of depression than individuals in the general population; and smoking is the leading risk factor for the development of COPD.

Meds to the rescue

Many depressed individuals with COPD could benefit from antidepressant medications but are not adequately treated. One reason is that they often do not ask for help, erroneously assuming that it is “normal” to be depressed in the face of such major life challenges. Another problem is that medical professionals sometimes shy away from prescribing antidepressants for these patients who are already on numerous medications.

People with COPD should be proactive in addressing the issue with their clinicians. While some antidepressants should be avoided by people with COPD, there are others that can be extremely effective and that will have minimal negative interactions with COPD drugs.

People with COPD don't need to live in a permanent state of reactive depression. Medical intervention can be significantly helpful. Untreated or ignored depression can result in poorer quality of life

which can be correlated to more frequent exacerbations, hospitalizations and mortality.

Creating a new you

People are multifaceted and capable of contributing to family and society in a variety of ways. However, most people become accustomed to a particular set of contributions, such as bringing home a paycheck or taking care of children. These roles become their self-identity.

The core of self esteem for many in our society—particularly men—is tied up with their role as breadwinner and employed person. Losing this role due to illness can be devastating and can lead to depression. We live in a society that tends to implicitly value members who are employed above those who are not. It requires time and rethinking to shift that perception and learn to value yourself even if you do not bring home a paycheck.

Women face equally formidable challenges. Women who have defined their role in life as nurturing and taking care of others must learn how to be on the receiving end of care. Women with COPD can be uncomfortable about accepting help from others. They should acknowledge that their friends or family members will feel good and useful by helping them out, so let them.

To create a new identity, a person must be able to mourn the loss of the old identity, the loss of an accustomed lifestyle that involved easy mobility, and innumerable activities. Mourning is not the same as depression. Mourning means acknowledging the loss and confronting the difficulty the loss presents. It is an active process and it enables people to move on.

Ask for help and access support

Ask others to assist you with the things that give you difficulties or will cause over-exertion. It is an empowering thing to learn to ask for help, even though it may be difficult in the beginning.

It can be difficult for people to recognize and verbalize their losses. Overcoming feelings of shame, self-consciousness, or fear of stigma also takes time and requires the rethinking of assumptions. Talking to a trusted friend or psychotherapist

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Understanding hypoxemia

Hypoxemia (or hypoxaemia as spelled in the Oxford English Dictionary) is an abnormally low level of oxygen in the blood. More specifically, it is oxygen deficiency in arterial blood. Hypoxemia has many causes, often respiratory disorders, and can cause tissue hypoxia as the blood is not supplying enough oxygen to the body. This can happen even though blood flow is normal. Hypoxemia can lead to many serious, sometimes life-threatening complications.

Hypoxemia can be caused by lung diseases such as chronic obstructive pulmonary disease (emphysema and chronic bronchitis), pneumonia and pulmonary edema (fluid in the lungs), lung damage due to trauma, strong pain medicines and other drugs that can restrict breathing.

Typical tests doctors use to check your oxygen levels include pulse oximetry and an arterial blood gas test. Pulse oximetry is a test where a sensor that slips over your finger measures the amount of oxygen in your blood. With an arterial blood gas test, a needle is used to take a blood sample from your artery to measure the levels of oxygen in your blood. To diagnose hypoxemia, your doctor will do a physical examination to listen to your heart and lungs. Abnormalities in these organs can be a sign of low blood oxygen. Your doctor may also check to see if your skin, lips, or fingernails look bluish.

Treatment for hypoxemia aims to raise the levels of oxygen in the blood. Doctors can use medications to treat underlying conditions that cause hypoxemia. These medications are often given through an inhaler that enables you to breathe the medicine into your lungs. In more severe cases, your doctor may prescribe oxygen therapy. The extra oxygen is usually delivered through a device called a cannula (tube) that is clipped to the outside of the nose. The location and amount of time people receive oxygen therapy is based on individual needs determined through consultation with your doctor. Supplemental oxygen is a prescribed therapy that must go through your doctor. You may receive oxygen at home or with a portable machine while you are outside or while travelling.

Hypoxemia symptoms can resolve with treatment. Depending on the cause, people with hypoxemia may require treatment once or on an ongoing basis. Your doctor will work with you to manage the condition so you can live an active, healthy life.

Endorphins continued from page 5

can help, so can sharing with a support group. Joining a support group can be an excellent way to make new friends and feel less isolated. Support groups also provide a venue where people can express feelings of loss, anger, fear, sadness, and other emotions that arise in the face of a chronic illness.

Certain forms of psychotherapy are particularly useful in helping people come to terms with illness and learn new coping strategies. It is possible to grow and expand by availing oneself of programs for retired individuals offered by universities, community centres, and religious institutions. People can also develop new hobbies, make new friends, and deepen existing friendships.

If you can, plan activities in advance. By doing advance planning, you will cut out a lot of the stress in life. Think carefully about getting ready to go out, all the things you need to do and, if necessary, make a checklist of the things you need to take with you. Every difficulty offers opportunities for personal growth and redefinition. Certainly, having COPD is a major life challenge, but many people with the condition find new meaning in their lives and new ways to interact with the world.

Note: This information is provided to you as an educational service, compiled and presented by COPD patients. It is not meant to be a substitute for consulting with your own physician.

References

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2707161>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3025448>



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For more information contact: Henry Roberts
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telephone: 416-465-6995



COPD people

Sandy Lemm

Sandy was born in Winnipeg, then became a Canadian ping-pong ball, bouncing between Toronto, Montreal and Vancouver. In 1967, he started as an office boy at a Vancouver ad agency and never looked back, eventually becoming a Vice President, Creative at Canada's largest agency at the time, McLaren Advertising. His career took him to many of the largest agencies in the country, working on accounts like Molson, General Motors, Royal Bank, Mazda, and Diet Coke. Sandy met his wife Mary Anne when she was a reporter at a rock-and-roll radio station in Vancouver. Sandy consulted for her station and when Mary Anne mispronounced then Dallas Cowboys' coach Tom Landry as Tom *Laundry* on air he called her to humorously point out the error. That led to a lunch date, which led to marriage a couple of years later. In 1985, the two moved to Toronto for better opportunities. Mary Anne is now a documentary film producer/director and was Sandy's 'coach' before, during and after his transplant. They have two grown sons. Eric is a UofT grad in political science/history. Trevor is completing his degree in Civil Engineering Technology and is currently doing his co-op program with Ellis-Don.

Were you a smoker?

Yes. For 30 years. I quit 20 years ago.

When did you suspect that something was wrong with your breathing?

About fifteen years ago, I ran up to our 3rd floor and was winded. That had never happened before.

Do you think it was related to smoking?

My mom smoked, my father smoked. He died of emphysema. But we had asbestos in one of our homes, so we don't definitely know how I got emphysema.

What did you do?

I met with my GP who sent me to a respirologist who diagnosed my COPD.

What kind of medication were you prescribed?

Symbicort and Spiriva. Also, a rescue inhaler. Ventolin, the blue puffer

How did you end up with a lung transplant?

I was involved in Toronto Western's pulmonary rehab program. Their respiratory therapist suggested that I check out lung transplantation. I got an interview at Toronto General Hospital's Transplant Clinic in January 2017.

What was the process like at Toronto General?

Right away they asked if I was depressed. I said, only about my condition. They said they could fix that. They were really interested in my attitude. They want to know that people are hungry for life, and will go the distance. As they said, it's very involved and intense.

What happened then?

The 'Assessment Week'—of both physical and mental assessments and tests; from checking your heart to reviewing the complete surgical/recovery

process in great detail. A taste of what's to come.

Was your wife involved?

Yes. You must have a dedicated partner/coach to go through the entire process with you. They have to know everything that will happen from the time you get "the call" for the surgery to the follow-up, months and even years, after your surgery. As the Transplant Team says, "One person gets the transplant, but two people live through it."

What is the surgical room like?

Wow. It hit me like something out of Star Wars. This was the big time. The wonderful surgical team radiates confidence. In my mind I actually said, "I'm safe."

How long does the procedure take?

Mine was 8-1/2 hours. My wife said I had so many tubes coming out of me I looked like a Christmas tree.

When did you have the transplant?

Went on the transplant 'list' on December 12, 2017. I had a double-lung transplant in February, 2018.

How did you feel when you came to in the recovery room?

Confused, delirious, exhausted. A couple of days after, I was getting back to normal.

How do you feel now?

I feel great. Tons of walking, stairs. Back to my old weight, but they joke I have 'prednisone cheeks.'

Are you and Mary Anne able to travel?

Not outside Canada because travel insurance companies hear the word 'transplant' and get antsy. But a fellow transplant recipient has found a solution, so we'll see. But just being able to breathe, that's a trip in itself. Trust me.

Helping people breathe

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RESPECT

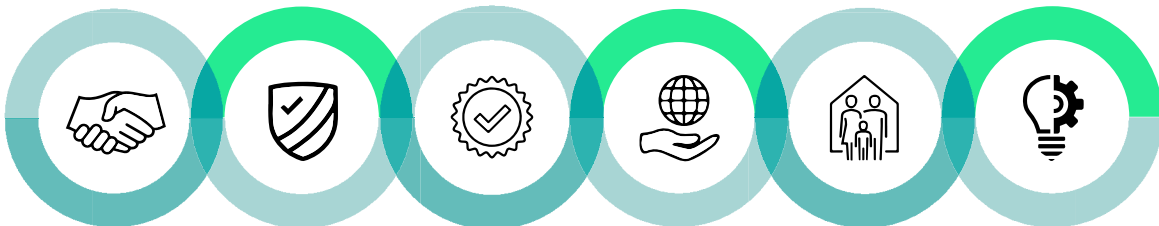
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